Vienna Tetrachloroethene

EPA Region 3
West Virginia
Wood County
Town of Vienna

EPA ID# WVD988798401 **Last Update:** August 2002

1st Congressional District **Other Names:** None

Current Site Status

The U.S. Environmental Protection Agency (EPA) has completed a Remedial Investigation/Feasibility Study to determine the nature and extent of the contamination at the Vienna site and develop cleanup alternatives. On July 15th, EPA issues a proposed plan for cleanup for public comment. A decision document is expected this fall.

Site Description

The city of Vienna is a residential and commercial community approximately three square miles in area with a population is 10,862. The population and the majority of businesses in Vienna receive their water from the Vienna municipal water supply, which originally consisted of 12 wells located in clusters in various areas of the city. Presently, only eight wells produce potable water due to PCE contamination.

Site Responsibility

This site is being addressed though an EPA Superfund Removal Action and an EPA Superfund Remedial Action. A Remedial Investigation/Feasibility Study (RI/FS) began in the Fall of 2000. EPA expects the RI/FS results in late 2001.

NPL Listing History

This site is on the National Priorities List.

Threats and Contaminants

In February 1992, PCE was detected in municipal wells 1 through 4 located at City Hall. These wells were removed from service on June 11, 1992. Municipal wells 5 and 6 are located approximately 1,000 feet northwest of City Hall. These wells were sampled by the West Virginia Division of Environmental Protection (WVDEP) and were found to have concentrations of PCE as high as 70 micrograms per liter. Groundwater contaminated with PCE exists under an area of at least 20 blocks within the central part of the city of Vienna. The highest concentrations were observed adjacent to a dry cleaning facility, approximately 500 feet northwest of City Hall, where PCE was observed as high as 34,000 micrograms per liter in the groundwater and 20,000 grams per kilogram in the subsurface soils. Because municipal wells 7 and 8 are located only 1,400 feet northwest and down gradient of municipal wells 5 and 6, there is significant concern that these wells will also become contaminated.

Contaminant descriptions and associated risk factors are available on the Agency for Toxic Substance and Disease Registry, an arm of the CDC, web site at http://www.atsdr.cdc.gov/hazdat.html EXIT disclaimer

Cleanup Progress

On September 19, 2000 EPA began the field portion of the Remedial Investigation/Feasibility Study (RI/FS). A team of hydrologist and geologists began mapping the underground PCE plume utilizing Cone Pentrometer Technology (CPT) rigs. These rigs pushed a hole 60 to 80 feet below the ground surface and then sampled the groundwater for contamination. All groundwater samples were analyzed for trichloroethene (TCE), tetrachloroethene (PCE), cis-1,2-dichloroethene, and trans-1,2-dichloroethene (cis- and trans-1,2-DCE) by the onsite mobile laboratory. Analytical data was reviewed

on a daily basis in order to select additional locations for CPT groundwater collection. This approach provided “real time” screening data for use in quickly estimating the extent of the PCE groundwater contamination.

Once the CPT was collected and analyzed, EPA was able to locate the placement of monitoring wells with a great deal of accuracy. These wells will allow more accurate data to be generated about the plume as well as allow EPA to monitor the plume long term. EPA began installing these wells in November 2000 and all wells were completed as of January 2001.

On February 2, 2001 EPA began the first of three rounds of sampling from the wells installed in Vienna. The sampling continued until February 15, 2001. EPA will return for the next two rounds of sampling in May and then again in August.

EPA completed the third round of sampling in October of 2001. The results of the sampling as well as numerous other information gathered from a variety of analytical tests have been gathered in a RI/FS detailing the best alternatives to remediate the Site. This information was released in April 2002. The information contained in the RI/FS will help form the decision that EPA will make in determining a remedy in Vienna. The Proposed Plan utilizing this information will be released in July 2002.

On February 24, 1993, the Regional Administrator approved a CERCLA Funding Request of $924,990. This funding was used to construct two additional municipal wells (wells 13 and 14) in a hydraulically isolated area on the north end of the city. An extensive subsurface investigation was also conducted. The first phase of this investigation consisted of a soil gas survey to assess the source(s), extent and magnitude of the PCE contamination in the aquifer. The second phase included installation, development, and sampling of four groundwater monitoring wells in the vicinity of the contamination. In addition, two exploratory wells were installed in the hydraulically isolated area to evaluate its suitability for installation of the new municipal water wells. Groundwater sampling, geologic logging, soil sampling and test pump down rates were used to determine the suitability of the new municipal well field and to aid in the engineering design of the new municipal production wells.

Evaluation of recent data indicates that a new technology employing vacuum vaporizer wells and a central treatment system is capable of removing PCE from under the Vienna Cleaners source area. A CERCLA Funding Request has been approved to design and operate a vacuum vaporizer well treatment systems. This system is now in the design stage. The actual groundwater cleanup of the PCE plume, which lies under a 20-block area of the city, will be conducted by the Remedial Program using NPL funding. In the interim, the Removal Program continues to monitor the concentration and direction of the PCE plume, which is moving in the direction of active municipal production wells 7 and 8. In July 1999, EPA installed a monitoring well to serve as an early warning for PCE contamination approaching wells 7 and 8. In November 1999, EPA installed five temporary monitoring wells to define the leading edge of the PCE plume. Also, EPA installed a ‘pilot’ system to remove tetrachloroethene (PCE) from the soil in late 2000. Results received in early 2001 from the pilot system are presently being evaluated.

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The detailed Administrative Record can be examined at the following location:

Vienna Public Library
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304-295-7771